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Attorney Docket No. 040301/0539

REMARKS

Claims 9-24, 29 and 30 were pending in this application. By way of this amendment and reply to the Office Action mailed September 30, 2002, new claim 31 has been added. Claims 9-24 and 29-31 are presently pending for further consideration.

In the Office Action, claims 9-11 and 13 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,061,650 to Malkin; claims 12, 14-23, 29 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Malkin in view of U.S. Patent No. 5,729,537 to Billstrom; and claim 24 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Malkin in view of U.S. Patent No. 5,159,592 to Perkins. These rejections are traversed for at least the reasons given below.

First, regarding independent claim 9, the Office Action incorrectly asserts that column 6, lines 1-2 and 31-35 of Malkin discloses the claimed registration message transmission unit, and that column 2, lines 22-65 of Malkin discloses the claimed mobile computer management device.

However, column 6, lines 1-2 of Malkin provides a description of a Home Agent in a Mobile IP, and column 6, lines 31-35 of Malkin provides a description of a Foreign Agent in the Mobile IP, both of which are different from a Mobile Node that corresponds to the claimed mobile computer device. Moreover, column 6, lines 1-2 and 31-35 of Malkin fail to mention any sending of a registration message from a mobile computer device (mobile node) located outside of the home network to a mobile computer management device (home agent) in the home network, as required for the claimed registration message transmission unit as recited in claim 9.

Furthermore, column 2, lines 22-65 of Malkin describes an operation of a Remote Access Server (RAS) in cooperation with a Tunnel Management System (TMS) and an Authentication Server (AS). This RAS is described as functioning as the Foreign Agent (see column 6, line 13 of Malkin) in the service provider network (see Fig. 1). Therefore, Malkin's RAS clearly cannot correspond to the

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claimed mobile computer management device in the home network of the mobile computer device, and therefore Malkin's RAS does not have any function for managing the current location of the mobile computer device.

Malkin's Authentication Server (AS) 20 is located in the home network, but it appears to be only used to provide authentication, and thus this element also does not appear to manage the current location of the mobile computer device.

The Office Action also incorrectly asserts that column 3, lines 47-53 of Malkin discloses the claimed user-input-based information transmission unit.

However, column 3, lines 47-53 of Malkin describes the operation of the RAS to query the TMS, which is not an operation of the mobile computer device (mobile node), since Malkin's RAS 12 is provided in a Service Provider Network 14 and is separate and distinct from the Remote Node 10. Thus, Malkin fails to disclose or suggest any sending of user-input-based information to a mobile computer management device in a home network in response to a challenge message from a mobile computer management device in the home network, as required by the claimed user-input-based information transmission unit.

Thus, since Malkin fails to disclose or suggest at least the claimed registration message transmission unit and the claimed user-input-based information transmission unit, Malkin cannot anticipate the mobile computer device of claim 9.

The same argument also holds for the dependent claims 10-13 as well as a corresponding article of manufacture claim 29.

Furthermore, with respect to dependent claim 10, the Office Action asserts that Malkin's authentication unit 12 judges a properness of a mobile computer management device according to a challenge message. However, please note that Malkin's authentication unit 12 is separate and distinct from his Remote Node 10, whereby Malkin's Remote Node 10 is the element that

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corresponds best to the claimed mobile computer device. Therefore, since the functions of Malkin's authentication unit 12 are performed by a unit outside of his Remote Node 10, Malkin's authentication unit 12 cannot correspond to the claimed authentication unit (which is a part of the claimed mobile computer device).

Next, regarding the independent claim 14, the Office Action incorrectly asserts that column 2, lines 41-48 of Malkin discloses the claimed user authentication unit.

Rather, column 2, lines 41-48 of Malkin describes an operation of a Remote Access Server (RAS) for sending a remote authentication request to an Authentication Server (AS) in order to authenticate the dial-in PPP connections. These clearly are not an operation of a mobile computer device (mobile node), whereby the claimed mobile computer device would correspond best to Remote Node 10 in Malkin, which is separate and distinct from Malkin's RAS and AS. Accordingly, Malkin fails to disclose or suggest any local user authentication at the mobile computer device, as required for the claimed user authentication unit.

The Examiner also incorrectly asserts that column 5, lines 66-67 and column 6, lines 1-2 and 31-35 of Malkin disclose the claimed registration message transmission unit, and that column 2, lines 22-65 of Malkin discloses the claimed mobile computer management device.

Rather, column 5, lines 66-87 and column 6, lines 1-2 of Malkin provide a description of a Home Agent in a Mobile IP, which is different from a Mobile Node that best corresponds to the claimed mobile computer device. Moreover, column 5, lines 66-67 and column 6, lines 1-2 of Malkin fail to disclose or suggest the sending of a registration message from a mobile computer device (mobile node), located outside of a home network, to a mobile computer management device (home agent) in the home network, as required by the claimed registration message transmission unit. In addition, Malkin also fails to

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disclose or suggest any use of network information read out from an external memory device in an operation to send the registration message.

Furthermore, column 2, lines 22-65 of Malkin describes an operation of a Remote Access Server (RAS) in cooperation with a Tunnel Management System (TMS) and an Authentication Server (AS). The RAS is described as functioning as the Foreign Agent (see column 6, line 13 of Malkin) in the service provider network (see Fig. 1). Therefore, Malkin's RAS cannot correspond to the mobile computer management device in the home network of the mobile computer device, and also RAS does not have any function for managing the current location of the mobile computer device. Note that Malkin's RAS 12 is located in his Service Provider Network 14, and not in the Home Network 18.

The Office Action also incorrectly asserts that column 3, lines 46-53 of Malkin discloses the claimed user-input-based information transmission unit.

Rather, column 3, lines 46-53 of Malkin describes the operation of the RAS to query the TMS, which is not an operation of a mobile computer device (mobile node). Also, Malkin fails to disclose or suggest the use of any user-input-based information to be used for the user authentication at the mobile computer management device, and for any sending of such a user-input-based information to the mobile computer management device in the home network, as required by the claimed user-input-based information transmission unit.

The Office Action correctly recognizes that Malkin fails to disclose the claimed external interface unit, but then it erroneously asserts that this feature is disclosed in column 6, lines 37-59 of Billstrom.

Rather, column 6, lines 37-59 of Billstrom only describes a subscriber identity module (SIM) card that stores an international mobile group identity, an authentication key, a destination address, an international mobile subscriber identifier and an associated authentication key (see in particular column 6, lines 43-51 of Billstrom), none of which corresponds to the claimed network information to be used in sending a registration message, as required by the claimed external memory device. Moreover, there is no motivation to consider

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the incorporation of this SIM card feature of Billstrom into the system of Malkin. In particular, Billstrom uses the SIM card to provide anonymous access to a communication network, while Malkin's system is directed to transparently providing a remote node with mobile network functionality. Since Malkin's system strives to identify a mobile computer device that is operating outside of its home network, to add the "anonymous access" feature of Billstrom would in many ways defeat the purposes of Malkin's system.

Still further, claim 14 recites a dual authentication system, which includes a first authentication done locally at the mobile computer device, and a second authentication done externally at the mobile computer management device. Again, column 2, lines 41-48 of Malkin, which are cited in the Office Action as allegedly corresponding to the first authentication, are done by the RAS 12 and the AS 20, which are elements external to Malkin's Remote Node 10.

Thus, the combination of Malkin and Billstrom (assuming such a combination could be properly made) fail to teach or suggest the claimed external interface unit, the claimed user authentication unit, the claimed registration message transmission unit and the claimed user-input-based information transmission unit. Therefore, claim 14 is not unpatentable over the purported combination of Malkin and Billstrom.

The same argument also holds for the dependent claims 15-24 as well as a corresponding article of manufacture claim 30.

More particularly, dependent claim 15 recites that user authentication unit permits reading from the external memory device when the first authentication succeeds. The Office Action asserts that column 4, lines 58-65 of Malkin discloses this feature, but this assertion is incorrect. Rather, no reading of an external memory is performed or taught in column 4, lines 58-65 of Malkin; instead an RAS is utilized to set up a communications path for the Remote Node.

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With respect to dependent claims 20 and 21, the Office Action correctly recognizes that "Malkin with Billstrom fails to teach for a second user authentication." The Office Action then incorrectly asserts that to include such a process would have been obvious "since the process would accommodate more users." This statement is difficult to understand, since having a second user authentication would not necessarily accommodate more users, but rather it provides a more robust authentication system to authenticate both locally and non-locally, which is a feature lacking from the combined teachings of Malkin and Billstrom. Further clarification from the Examiner is requested if this rejection is maintained.

With respect to dependent claim 24, the claimed internal memory temporarily stores the desired information read out from the external memory, whereby the desired information includes both the user information and the network information. At best, Perkins discloses temporarily saving a pseudo-IP address, which would correspond to network information but which would not correspond to user information that is used to authentication the user.

New dependent claim 31 depends from claim 24, and recites specific features of the information stored in the internal memory that are discussed in the above paragraph, whereby such information stored in an internal memory is not believed to be disclosed, taught or suggested by the cited art of record. At best, Perkins teaches the storing of a pseudo-IP address, but it does not teach or suggest the storing of information used for authentication, whereby such information is deleted when the communication using the desired information is finished.

Therefore, for the reasons stated above, this application is believed to be in condition for allowance, and an early indication of allowance is earnestly solicited.

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The Examiner is encouraged to contact the undersigned at the local telephone number listed below, if any issues remain to be resolved.

Respectfully submitted,

27 March, 2003
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